

ABSTRACT

Radiation Source, Lithographic Apparatus, and Device Manufacturing Method

5 A radiation source unit is provided that includes an anode and a cathode that are
configured and arranged to create a discharge in a substance in a space between said anode and
cathode and to form a plasma so as to generate electromagnetic radiation. The substance may
comprise xenon, indium, lithium, tin or any suitable material. To improve conversion
efficiency, the source unit may be constructed to have a low inductance, and operated with a
10 minimum of plasma. To, for example, improve heat dissipation, a fluid circulation system can
be created within the source volume and a wick by using a fluid in both its vapor and liquid
states. To, for example, prevent contamination from entering a lithographic projection
apparatus, the source unit can be constructed to minimize the production of contamination, and
a trap can be employed to capture the contamination without interfering with the emitted
radiation.

15